

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

Papers in Natural Resources

Natural Resources, School of

1996

WOOD THRUSH NESTLINGS FED FRUIT BY SINGLE PARENT

Larkin A. Powell

University of Nebraska-Lincoln, lpowell3@unl.edu

Kathleen Rangen

Georgia Cooperative Fish and Wildlife Research Unit Warnell School of Forest Resources, University of Georgia

Jason Lang

D.B. Warnell School of Forest Resources, University of Georgia,

Follow this and additional works at: <http://digitalcommons.unl.edu/natrespapers>

Powell, Larkin A.; Rangen, Kathleen; and Lang, Jason, "WOOD THRUSH NESTLINGS FED FRUIT BY SINGLE PARENT" (1996). *Papers in Natural Resources*. 432.

<http://digitalcommons.unl.edu/natrespapers/432>

This Article is brought to you for free and open access by the Natural Resources, School of at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Papers in Natural Resources by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.

THE ORIOLE

A Quarterly Journal of Georgia Ornithology
Official Organ of the Georgia Ornithological Society

VOL. 61

MARCH 1996

NO. 1

WOOD THRUSH NESTLINGS FED FRUIT BY SINGLE PARENT

Larkin A. Powell^{1,2}, Kathleen L. Rangen²
and Jason D. Lang^{1,2}

The Wood Thrush (*Hylocichla mustelina*) diet consists of both insects and fruits. Insects provide birds with more crude protein (31-80%, Robbins 1983) than fruit (e.g. cherry: 2%, Martin et al. 1951). Thus, Wood Thrushes eat little fruit material during spring (5% of diet) and summer months (35%), but fruits comprise 77% of the diet during the fall when insects are less available (Martin et al. 1951). Wood Thrush nestlings are fed largely on an insect diet and are not fed plant materials until they are well developed (Martin et al. 1951, Ehrlich et al. 1988). Of course, the type of food and amount delivered to nestlings is determined by the energy content of the food delivered and the adults' foraging ability and time constraints (Ricklefs 1974).

We monitored 153 Wood Thrush nests during 1993-96 at the Piedmont National Wildlife Refuge (PNWR), as part of a research project for the University of Georgia. PNWR is located in Jones and Jasper Counties, north of Macon, Georgia.

On 4 July 1995, we found 20-30 Black Cherry (*Prunus serotina*) pits in the cup of a Wood Thrush nest that had fledged the previous day. We found some insect remains in several nest cups during 1993-96, but this was the only nest to exhibit evidence that nestlings are fruit. We believe the female, who fed the nestlings without the help of a mate, may have switched to a fruit diet to efficiently provide her brood with the necessary energy to complete their growth in the nest.

We had been using radio telemetry to monitor the male and female Wood Thrushes since 10 May and 6 May, respectively. The pair were successful at producing fledglings from the first nest, and this was their second nesting attempt during 1995.

The pair initiated the nest on 12 June with a clutch of 3 eggs, and the eggs hatched on 23 June. On 26 June, the male died during mist netting which was conducted in an attempt to attach a new radio transmitter.

Both male and female Wood Thrushes feed the young (Brackbill 1958). Following the male's death, we did not observe any new males or helpers at the nest. Also, the female was only on the nest during 43%

(n=3 of 7) of the telemetry observations, compared to 58% (n=7 of 12) of the observations during the nestling period of her previous nest (chi-square = 0.425, $P = 0.52$). So, the female apparently raised the nestlings alone, and she may have become more active as a single parent, although our limited numbers of telemetry observations during both nesting attempts did not show a significant change.

Black Cherry fruits furnish less energy per unit mass than insects: fruits provide 0.64 kcal/g of metabolizable energy, compared to 1.18 kcal/g from insects (Rickkefs 1974). However, Black Cherries are locally common at the PNWR. In late June and early July this was an available food source which, once located, would provide a constant supply. In contrast, insects may have required more intensive foraging efforts by the lone female.

Three fledglings were produced from this nest. We believe the female Wood Thrush may have changed foraging strategies after the death of her mate. She found a readily available source of food to facilitate her efforts to feed her brood in the late nestling stage. This underscores the current efforts of habitat managers at PNWR to provide diverse habitats for nesting songbirds.

ACKNOWLEDGMENTS

This research was carried out during a large scale Wood Thrush research project for the D.B. Warnell School of Forest Resources and Institute of Ecology, University of Georgia, under the direction of M.J. Conroy and D.G. Krementz. We are grateful to R. Shell and the Piedmont National Wildlife Refuge for their support. C. Straight, R. Ranalli, C. Ploegstra, R. Anderson, J. Tomita, D. Jacobson, and J. Savage helped find and monitor nests. The Georgia Ornithological Society, National Biological Service, and the Georgia Department of Natural Resources provided funding for this project.

LITERATURE CITED

- Brackbill, H. 1958. Nesting behavior of the Wood Thrush. *Wils. Bull.* 70:70-89.
- Ehrlich, P.R., D.S. Dobkin, and D. Wheye. 1988. The birder's handbook: a field guide to the natural history of North American breeding birds. Simon & Shuster, Inc., New York.
- Martin, A.C., H.S. Zim, and A.L. Nelson. 1951. American wildlife and plants: a guide to wildlife food habits. Dover Publications, Inc., New York.
- Ricklefs, R.E. 1974. Energetics of reproduction in birds. Pages 152-297 in R.A. Paynter, Jr., ed. *Avian energetics*. Nuttall Ornithological Club Publication, Cambridge.

Robbins, C.T. 1983. Wildlife feeding and nutrition. Academic Press, Inc., Orlando.

¹ *Institute of Ecology and* ² *D.B. Warnell School of Forest Resources, University of Georgia, Athens, GA 30602.*